

S/N 10/777,957

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Paul Shirley et al.

Examiner: Bibi Carrillo

Serial No.: 10/777,957

Group Art Unit: 1746

Filed: February 13, 2004

Docket: 303.774US2

Title: SPINDLE CHUCK CLEANER

RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Mail Stop Appeal Brief - Patents

Commissioner for Patents

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Alexandria, VA 22313-1450

This responds to the Notification of Non-Compliant Appeal Brief 37 CFR § 41.37 mailed on May 15, 2007. In compliance with MPEP 1205.03(B) and 37 CFR 41.37(c)(1)(v), Appellants submit the following corrected section from Appellants' previously-submitted Appeal Brief filed on February 6, 2006.

Please replace the previously-submitted Summary of Claimed Subject Matter Section 5 with the below replacement:

5. SUMMARY OF CLAIMED SUBJECT MATTER

Some aspects of the present inventive subject matter include, but are not limited to, methods for cleaning a support. An embodiment of the present invention includes methods for cleaning a support, such as a chuck or wafer holder. An embodiment of the method includes moving the cleaning surface of a cleaning head into contact with the support and removing contaminants from the support. The contaminants from the support are removed by vacuuming the contaminants through the cleaning head assembly. Figures 5 and 6 show two embodiments of apparatus that perform the method of cleaning the support. Figure 5 shows an arm 506 that includes fluid pathways 511 connected at one end thereof to a vacuum source 512. The pathways 511 extend through the arm 506 and open at ports 514 in a face of the cleaning head assembly 508. The cleaning head assembly 508 includes, in an embodiment, a base 521 that has the pathways 511 and ports 514 extending therein. The vacuum source 512 through pathways 511 and ports 514 removes contaminants or particles from the volume adjacent the face of the support, such as the chuck 305. (See page 9, lines 13-18 of the specification)

Figure 6 shows an embodiment similar to Figure 5. However, the Figure 6 embodiment does not have a brush mounted on the cleaning assembly 508. In an embodiment, the assembly 508 is moved closely adjacent the chuck 305. Contaminants, e.g., particles, are vacuumed off the chuck surface by the vacuum source 512 through the ports 514 and pathways 511. (See page 10, lines 7-11 of the specification)

One embodiment of the method includes removing a wafer from the support adapted to releasably hold a wafer, and, thereafter, moving the cleaning surface into contact with the support (See page 4, lines 9-10 of the specification). The embodiment also includes removing contaminants from the support adapted to releasably hold a wafer by vacuuming the contaminants (See page 3, lines 25-27 of the specification) through the cleaning surface (See page 9, lines 12-14 of the specification).

The embodiments of the invention operate in a clean environment in which it is necessary to control contaminates, which may come into contact with wafers and circuits. Potential contaminants include particles, metals, organic molecules and the like.

Specifically, the embodiment of claim 33 is directed toward a method for cleaning a support 300 adapted to releasably hold a wafer (See page 9, lines 3-5 of the specification), such as a wafer 100 or 425, and the method includes providing a cleaning surface 523 of a cleaning head assembly 508, moving 504, 530 the cleaning surface 523 into contact with the support 300 adapted to releasably hold a wafer, and removing contaminants from the support by vacuuming 512 the contaminants through the cleaning head assembly 508 (See page 9, lines 23-25 of the specification). This method is further supported by the discussion related to FIG. 5 in the specification.

Specifically, the embodiment of claim 55 is directed toward a method for cleaning a support adapted to releasably hold a wafer (See page 9, lines 3-5 of the specification). The method includes providing a cleaning surface 523 (See page 9, lines 18-19 of the specification), removing a wafer 425 from the support adapted to releasably hold a wafer 300 (FIG. 4 includes the wafer while FIGs. 5 and 6 have the wafer removed), thereafter, moving the cleaning surface 523 into contact with the support (via joint 504 and spin drive 530) (See page 9, lines 24-25 of the specification), and removing contaminants from the support 300 adapted to releasably hold a wafer by vacuuming 512 the contaminants through the cleaning surface 514.

Independent Claim 33

33. A method for cleaning a support adapted to releasably hold a wafer 425, comprising:
providing a cleaning surface of a cleaning head assembly (See page 9, lines 18-19 of the specification);
moving the cleaning surface into contact with the support 300 adapted to releasably hold a wafer 425 (See page 9, lines 24-25 of the specification); and
removing contaminants from the support by vacuuming the contaminants through the cleaning head assembly (See page 9, lines 24-25 of the specification).

Independent Claim 55

55. A method for cleaning a support adapted to releasably hold a wafer (See page 9, lines 3-5 of the specification), comprising:

providing a cleaning surface 523 (See page 9, lines 18-19 of the specification);

removing a wafer from the support adapted to releasably hold a wafer 300;

thereafter, moving the cleaning surface 523 into contact with the support (See page 9, lines 24-25 of the specification); and

removing contaminants from the support adapted to releasably hold a wafer by vacuuming the contaminants through 514 the cleaning surface 523 (See page 9, lines 24-25 of the specification).

Conclusion

In accordance with MPEP 1205.03(B) and 37 CFR 41.37(c)(1)(v), only the non-compliant section of Appellants' previously-submitted Appeal Brief have been included in this response.

Appellants respectfully request withdrawal of the non-compliant status and examination of the Appeal Brief.

If necessary, please charge any additional fees or credit overpayment of Deposit Account No. 19-0743.

Respectfully submitted,

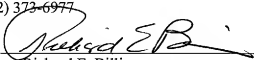
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 14 day of June 2007.

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